University of Pretoria Yearbook 2016

BScHons Applied Science Applied Science: Water Utilisation (12243029)

Duration of study	1 year
Total credits	128

Programme information

The BScHons (Applied Science) degree is conferred by the following academic departments:

- Chemical Engineering
- Civil Engineering
- Industrial and Systems Engineering
- Materials Science and Metallurgical Engineering
- Mechanical and Aeronautical Engineering
- Mining Engineering

Any specific module is offered on the condition that a minimum number of students are registered for the module, as determined by the head of department and the Dean. Students must consult the relevant head of department in order to compile a meaningful programme, as well as on the syllabi of the modules. The relevant departmental postgraduate brochures must also be consulted.

Admission requirements

An appropriate bachelor's degree, a BTech degree or equivalent qualification.

Other programme-specific information

A limited number of appropriate postgraduate modules from other departments are allowed. Not all modules listed are presented each year. Please consult the departmental postgraduate brochure.

Curriculum: Final year

Minimum credits: 128

Core modules

Industrial waste engineering 780 (WAI 780)

Module credits	32.00
Prerequisites	No prerequisites.
Contact time	32 contact hours per semester
Language of tuition	English
Academic organisation	Chemical Engineering
Period of presentation	Semester 1 or Semester 2

Module content

Identification of source materials, physical and chemical properties of waste. Release and transport mechanisms from source to air, groundwater, soil. Primary pathways of contaminants including sorption, volatilisation, biotic and abiotic transformations. Toxicology: absorption, distribution, biochemical transformation, and secretion of chemicals. Acute and chronic toxicity quantification and evaluation of risk. Hazard identification, exposure assessment, toxicity assessment and risk characterisation. Minimum requirements for the handling, classification and disposal of hazardous waste. Minimum requirements for waste disposal by landfill. Minimum requirements for water monitoring at waste management facilities. Recycling and resource management. Waste prevention, minimisation and optimisation.

Biological water treatment 787 (WBW 787)

Module credits	32.00
Prerequisites	No prerequisites.
Contact time	32 contact hours per semester
Language of tuition	English
Academic organisation	Chemical Engineering
Period of presentation	Semester 1

Chemical water treatment 787 (WCW 787)

Module credits	32.00
Prerequisites	No prerequisites.
Contact time	32 contact hours per semester
Language of tuition	English
Academic organisation	Chemical Engineering
Period of presentation	Semester 1

Water quality management 780 (WQB 780)

Module credits	32.00
Prerequisites	No prerequisites.
Contact time	32 contact hours per semester
Language of tuition	English
Academic organisation	Chemical Engineering
Period of presentation	Semester 1 or Semester 2

The information published here is subject to change and may be amended after the publication of this information. The General Regulations (G Regulations) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the General Rules section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.